

The ACORN KERNEL

Atari Computer Owners of Rochester, New York
(A.C.O.R.N.)

P. O. Box 23676
Rochester N.Y. 14692

August - 1987

MEETING: Wednesday August 12, 1987

TIME: 7:30 p.m. General meeting

LOCATION: Monroe Community College, Building 8, Room 100

SIG ACTIVITIES:

Basically Speaking 7:00 - 7:30 p.m. Room 8-100

ST Programming SIG 6:30 - 7:30 p.m. Room 9-107

EXECUTIVE MEETING - August 19, 1987 at Kathy Scoville's house,
28 Mertensia Lane, Henrietta

DEADLINE FOR KERNEL - August 19, 1987

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Laws of Computer Programming
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Atari Computer Owners of Rochester N.Y.

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Executive Vice-President	David Cox	328-5211
8-Bit SIG Vice-President	Chris Reich	
ST SIG Vice-President	Tom Bellucco	
Secreary	Paula Beetle	
Treasurer	Reid Hoadley	442-6135

ACORN KERNEL STAFF

ACORN Editors	Candi Nelson	334-5513
	Bruce Nelson	334-5513
	Dick Orme	334-4093
Advertising/Publicity	David Cox	328-5211
Production and Mailing	Bob Wilson	
	Reid Hoadley	442-6135
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THE PREZ SEZ

by Kathy Scoville

Summer is upon us and I have to confess to having a little trouble making myself write this column while the temperatures are in the 90's. My fingers keep sticking to the keyboarddddd. See what I mean? My apologies (as if I had any control) to the ST sig for being forced to conduct their meeting in a sauna! Hopefully, conditions will be a little more conducive to comfort for the remainder of our warm weather meetings.

I have verbal conformation of meeting rooms at **Brighton HS** starting in **September**. The **General Meeting** room will be **314N** (old room 245 for those of you who would know) and the **breakout room** (ST SIG) will be **262S** (old room 107). Unfortunately, I won't be able to see the rooms until the first week of September so directions will not be available in the September newsletter. We'll try to have signs around directing you. Try to come a little early so you have time to get lost! The August meeting will be held at MCC as usual.

I meant to do a little back slapping in my column last month and somehow didn't. Congratulations to **Jeff Gortatowsky** whose article "*The Amiga and ST - What Amiga Did Right*" appeared in its entirety in the January 1987 (Vol. 4, No. 1) NOAUG News.

I'd like to welcome our two new Sig VP's. Congratulations to **Chris Reich**, VP **8-BIT SIG**, and **Tom Bellucco**, VP **ST SIG**. I know there will be interesting things happening within these SIGS in the next eleven months. And, on behalf of the members of *ACORN*, I would like to thank **David Eichel** and **Stu Woodard** for holding down the forts when no one else was able to.

And, now I have to get back to my garden. I managed to put up the strawberry and raspberry jams BEFORE the heat wave. Now I have bushels of green beanlets, bunches of broccoli, and scads zukes as a RESULT of the heat wave. All 56 tomato plants are loaded and ready to start turning red. Sigh... Being president of *ACORN* is so much more fun.

IS THE ATARI ST IN TROUBLE?

by Marc Limata

reprinted from ST.A.R.R. Scope

The **Atari ST** series is going to be two years old this summer. Actually, *Atari* introduced the ST in January 1985 but "real" production units for the U.S. market did not ship until mid-July of 1985. *Atari* went on to produce the **Atari 1040 ST**. The **260 ST**, and other variants, were never produced. In fact several products that the "NEW" *Atari Corp.* said they were going to produce never made it. The most notable being the CD-ROM drive, the PC-DOS Box (IBM PC emulator), the 5.25" disk drive, Twin (a Lotus 1,2,3 spreadsheet clone), and a version of Microsoft Word. All were important products for the ST, and only one, *MicroSoft Word*, may make it to market, but not in its original form. *ATARI* has also made noises about an expansion box that would have a FAST 23 bit microprocessor (MC68020) and 1 megabyte of RAM. Just another rumor started by *Atari* as a marketing gimmick, or will we ever see it???

Atari has recently introduced two new ST families, one in Europe, and one in the USA. In Europe the **2080ST**, a 1040 with 2 megabytes of RAM, and in the U.S. the **Mega ST** family with 1,2, and 4 megabytes of RAM. Possibly the Mega ST will

replace the 2080 ST. You should also note the **Atari PC**, a low cost stripped-down **IBM PC** clone was also introduced.

The big question is "is the ST series of computers in trouble?" Why would I ask such a question? Well, recently, several people I know were in the market to buy computers for use at home. All of them started looking at computers before Christmas. As of this writing, all but two have purchased a computer, and not one of them an Atari ST. Four of them purchased low cost PC clones (IBM PC clones). One of them purchased a Commodore C128. Another bought a Tandy 1000SX (Radio Shack's IBM PC clone). The last two people are both expressing interest in some type of PC compatible, Apple Macintosh, or the new Amiga 2000. In fact two of my friends who have had PC clones for about a year or so are looking for a new or an additional computer, one is looking at an Apple Macintosh, the other at the Amiga 2000.

After seeing this, and then reading in a PC Week article about a drop in ST sales and a further decline in ST interest due to the Atari PC, I came to the conclusion that the ST series may be in trouble.

One of the main problem areas is the Atari never came through with the PC DOS emulator box that was rumored to give the ST the ability to run PC DOS software. The Amiga 1000 (the original Amiga) has an add on called SIDECAR that makes the Amiga software and HARDWARE compatible with the IBM PC and still maintains the Amiga multitasking ability. The new Amiga 2000 has both Amiga expansion and IBM PC and PC-AT expansion slots in it, and with a plug in board, it can be IBM PC software with a board that plugs inside the machine.

Some people look at the ST as being a sort of a "new and improved" Atari 130XE or 800XL. These potential ST customers may have never owned a computer before, or in the case of some, they have owned a Commodore 64, Atari 400 or 800, or some other home computer. These people may be turned off to the ST or to buying an Atari brand computer. First there is the Atari name, a company known for video games and home computers that were game oriented. Next the 520ST and even the 1040ST packaging looks more like a low cost "home" computer than a serious computer, especially when compared to PC clones (such as Zenith, Tandy 1000, etc...) which are usually considered "serious business flavored" personal computers. But, the real big blow is that you can not run PC software on the ST, but you can on the Amiga (with optional hardware).

So you go out and buy an Atari ST, and then you may have to buy a PC clone. The clutter of two systems, and the cost of both, is a major drawback. For example, a single disk drive, color 1040 ST system will cost you about \$1000. If you need to buy an additional PC clone to run some piece of software, you might spend \$900 to \$1200 for one with 640K, two disk drives, and a color monitor. While it is true you have two separate systems, you may not like the extra space required. The big problem, however, is in the area of expansion. If you add a \$600 hard drive to one unit it will not work with the other, so you are faced with spending another \$600 to \$700 for a second hard drive unit.

Another serious limitation of the ST is its difficulty in expansion. At least with a PC clone, Amiga, Apple II (and IIGS), Radio Shack CoCo III, Tandy 1000, and Macintosh you can expand the machine memory and I/O port capability without having to tear apart the machine and try to squeeze in some type of kludge board like you do for the ST.

Why would anyone want to run IBM PC software?? Well, first many people are using some type of IBM PC or clone at work. Many people have become familiar with PC operation or PC software. Next there is a large amount of good software for it. Except for the stuff I write for these newsletters I still use a PC clone for most of my word processing. In fact, I have come

across a lot of public domain, shareware, and freeware software for the PC's that offer features found on some of the more expensive software packages. Some of these packages would cost you about \$50 to \$150 for equivalent ST packages but they are free or at a very low cost for PC's and compatibles.

No matter what people say, the popularity and maturity of PC DOS has produced a much better variety and quality of software than that which is available for the ST. If you were to look at one of the biggest problems with the ST, it is the GEM based TOS operating system which is built into the ST. While the ST hardware may be a good value for the money, and of decent quality. The ST operating system software built into the machine affects its performance and the ability to develop great software in a timely manner. The design of the ST, and the speed of the hardware, should allow it to do multitasking (running several programs at once), but the ST cannot without special software. Some software is appearing that allows two programs to run at the same time. These programs have limitations and in some ways, are a kludge. If the ST had a real multitasking operating system, you would be able to take almost any software package and run it at the same time with another. I hate to say it, but the Amiga is a true multitasking computer. In fact, *Radio Shack's* latest Color Computer, the CoCo III, is now based upon a multitasking operating system, and, yes, Apple will offer software to make the new Macintosh a multitasking computer system. A new operating system due very soon for the IBM PC and compatibles will be multitasking.

Another problem ST users face is that there is currently no software on the ST that is 100% data and functionally compatible with popular IBM PC software packages. If there was a reasonably priced *Lotus 1,2,3* clone package that worked like 1,2,3, and you could transfer data and templates between the PC version and the ST with no COMPATIBILITY problems, then this would help the problem somewhat. It is important to note that 100% or 99.9% compatibility would be required. For example, if you were using *DBASE III* on a PC and wanted to run a *DBASE III* application program on an ST *DBASE III* clone (if it existed), it would have to run without any changes and with the same results. (All these examples assume that either the ST has a 5.25" disk drive or the IBM PC or PC compatible has a 3.5" disk drive.)

The ST is a good machine, but the competition is closing in on it. Apple has lowered the price of the Macintosh and introduced new models. Commodore has lowered the price on the Amiga 1000 and has introduced a lower cost version of it called the Amiga 500, and a much more expandable and more powerful version called the Amiga 2000. They have introduced (and or shipping) upgrades that make Amiga's IBM PC compatible. Atari has yet to address this weak point in the ST. Instead, they are introducing the Atari PC, which indicates they want you to buy another machine rather than upgrade your present one. Look at how they made a 520ST and 1040ST hard to expand. If you want to upgrade a 520ST to 1 megabyte of RAM, or increase your 1040ST to 2 or 4 megabytes of RAM, you must either take apart your machine and cram in the upgrade (the ST was not designed for memory expansion) or buy one of the newest or better Atari machines. This is in contrast to the Amiga, IBM PC, and most PC clones which allow you to simply plug in your expansion board and in a few minutes have your machine up and running without fear of damage.

I know this article really appears to knock the ST, and to seriously criticize it, but I thought the ST was a good piece of hardware, at a good price, when I bought it in August 1985. I still do. When I bought it, I knew it would take some time for good software to appear to take advantage of it's power. However, during the past two years, Atari has made a lot of claims and announcements on which they have not delivered. The new Mega ST improves on the ST, but who knows what it will really cost, and what it will really have when it finally reaches the market. I do not want to have to buy a Mega ST, especially since I thought I would be able to expand the ST I have. Two serious problems exist for the ST. First, the

competition is getting better (and cheaper), and second, the necessary software, and peripherals/expansions are not available for the ST (the PC DOS emulator box, for example). Software developers may not bother with the ST if they feel another machine offers them more potential sales and has a brighter future. In fact this, appears to be happening already.

Atari has shown a lack of support for current ST users. They have an attitude that indicates they would rather have you buy a newer version of the ST than expand on your present one. Maybe that explains why for the second year in a row Tandy-Radio Shack has outsold Atari in the under \$1000 personal computer market and home computer markets by almost 2 to 1. Only a few short years ago Atari computers were outselling Radio Shack's home computers by a considerable amount.

I can only hope the ST becomes a success despite *Atari Corp.* I think the ST has a lot of potential but it needs a lot of third party support. What I have seen of ST software so far (and expansion hardware) would not convince people to buy an ST over a PC compatible or clone, a Macintosh, or even an Amiga. In fact I would have to advise potential buyers that they should look at the Amiga or Macintosh models over the ST at this time. Let us hope that this changes and soon. Finally, I can only wonder if Atari is trying to tell us something by introducing the Atari PC ???

IS THE ATARI ST IN TROUBLE? (ANOTHER VIEWPOINT)

by Ralph Porter
Courtesy of ASTUN, May 1987

As editor of this newsletter I felt it important to present differing sides of opinions on the ST. The preceding article in my opinion does raise some important questions, however I felt the conclusions made are extremely subjective and only represents a small number when comparing the full potential market for the ST. The article assumes everyone wants IBM PC compatibility. This is just not the case. I for one could care less about having outdated, poorly designed hardware emulation. I began in computers long before IBM entered the personal computer market. I purchased and still use a CPM computer system. When IBM came along with the 8088 version computer I saw no advantage to it. To me the improvement over the Z80 was minimal. For the first several years of IBM's existence the CPM machines had better software. Most of the IBM software was simply worked over Z80 CPM programs, many simply run through code translators. In most cases the programs ran faster on the supposedly inferior Z80 than on the IBM PC. In nearly all cases the code was much smaller on the Z80. Smaller code is still true today. An 8 bit processor is much more memory efficient than larger machines. Look at the software. A program that ran on a Z80 in 48K of memory took more than twice as much memory to run on a PC. Even more memory would be required on the 68000. This is offset however by potential gains in speed of execution and sharply reduced memory prices.

Until the release of *LOTUS 123* there was no program of importance for the IBM that was not first available in the CPM market. Today CPM is almost a thing of the past, not because it was not good, but because people in this country have some kind of stigma for names (notably IBM). A look at other countries in the world show differing results. People in other places in the world are more concerned about operations than names. In several European countries the Atari ST is the top or close to top selling computer. Why, the people there are not so name brand oriented. They don't have the same stigmas that a large portion of our population share.

I would far rather see programs written for the ST, a superior processor chip than the one used in the vast majority of IBM clones. I am glad that Atari has not yet released an IBM add on box. Would I like to see one some day (maybe), but I am in no big hurry.

As I said I began with CPM. I updated my CPM computer from time to time as I field an impression to do so. When IBM came along I did not jump on the band wagon because I saw no advantage of it. Even today I do not own any IBM compatible computers. I am not an idiot on the subject however because I do use IBM PC's in my work. The funny thing however is that when ever possible I resort to using the ST. I agree TOS has its problems but it also has advantages. Most GEM software on the ST also allows you to use the conventional commands that IBM PC users must use. In addition they allow use of the mouse. This is truly an advantage while learning a program. Once acquainted with it the keyboard commands become handy. It is also good for little used commands. Command based users must get out the manual and look up the sequences where GEM users can simply bring down the appropriate menu box to use the forgotten commands. Unlike early Macintosh programs that required mouse usage for everything, most GEM programmers have seen the wisdom of offering both options. My opinion. Had Atari offered the IBM Blue Box at an earlier date then the ST would have never reached its potential. The lack of IBM compatibility has forced software developers to write their wares for the ST. The ST processor can run the programs faster and more efficiently than on the IBM. The memory segmentation requirement on the IBM made writing large programs a chore. That is why it took several years for the IBM market to obtain any programs, that were not first written for the CPM market. The previous article would have you think that extra programming skills required for the ST is a disadvantage. I hardly disagree. It took programmers some time after the IBM came out to understand and utilize the expanded potential of the processor. The ST with still more potential takes time to learn. The GEM interface does add time to development of programs until one is comfortable with it. I feel however that learning the advanced concepts required make you a better programmer, and results in better programs.

I will not dispute with the previous author the fact that more programs are available for the IBM, that for the Atari ST. I do however disagree with his assertion that all or even most IBM programs are better than the ones on the ST. The author claims that there are no *Lotus 123* or *DBMAN* like programs on the ST. I learned a spread sheet at work using *Lotus 123* on an IBM. I use *VIP Professional* on the ST. I use the same commands and I can use *LOTUS* files and macros without change on my ST using *VIP*. True *VIP Professional* is not an exact clone. It lacks some of the features of *Lotus* version II. With the exception of an import formatting provision I have never been bothered by the differences. The same is true of *DATABASE III* on the IBM and *DBMAN* on the ST. Although there is subtle differences, a requirement to avoid copyright infringements, the programs are so similar that a person acquainted with one can easily use the other. In both cases data and program compiles are compatible.

In another market (Desktop Publishing) I feel the ST is already a leader. Only one serious program has made its way to the ST market, however if you talk to people that have used both the Acclaimed Macintosh Publishing Programs and *Publishing Partner* on the ST, they will almost always agree that the ST version is easier to use and has more features. The closest computer, an IBM program Ventura Publisher costs nearly \$600, the even better ST program only \$150.

My opinion is that with the exception of isolated markets that the programs available on the ST are as good or better than similar programs available for other computers. The author discussed word processing. Here the IBM has a lead if you wish to pay \$\$\$ for your programs. On the ST, *Textpro* by Abacus offers Table of Contents and Index generation, and many other features of the more expensive IBM programs. It offers multiple columns etc. All this for \$49.95, A PC equivalent over \$300. In

Again I will agree that there is more and sometimes better public domain programs for the PC. One must however remember the several years it took to get to this point. There are several excellent ST public domain programs and more are appearing daily. When the IBM was only two years old one could not have located programs of the ST's caliber in its public domain market. When the ST is as old as the PC is when this comparison can be safely made. Until then let's keep things in perspective.

The author asserted that ST reduced sales was because the PC clones were shown by Atari. Again I disagree. The decline in sales was because the Mega ST was shown, and perspective ST buyers are waiting to see this machine. I do not believe the ST and the IBM PC are in the same market. A person requiring IBM compatibility will likely look at the new Atari PC clones. That is why Atari has introduced them. The name IBM is just so ingrown in America that nothing else will do, even if it is a superior product. However for a person looking for the best value their money can buy, then the Atari ST computers is the only choice. Where the previous author has noted that he has swayed people away from purchasing Atari Computers this author has done the opposite and shown people the advantages of the ST, rather than the disadvantages. True not all buy Atari but most do. The ST market and the PC market are different and both have their advantages.

For some reason this country feels the first good product is the best when in reality it is not. *Lotus 123* was first on the IBM, it is not the best spreadsheet but because it was first people think it was. The same was true of *Wordstar*, however *Word Perfect* is now a new leader after several years. Some time in the future we in America will also agree that IBM is not the best but it will take time. We must first get over our bias and name stigmas. (Authors note: *Lotus 123* was really an adaptation of *Visicalc*, a program produced first on the 6502 processor.)

Another complaint of the preceding article was Atari's support. Here I must agree it could be better, but again put in perspective Atari is no different than hundreds of other computer manufactures. In many cases their support is better. Many programmers are developing Atari programs because of the unnecessary RED TAPE that Apple and Commodore require of their developers. Here the ST is way ahead of the Amiga in software support, and although behind Apple, they are ahead of Apple considering the time frame aspect.

I feel that comparing the ST to the IBM is like comparing apples to oranges. They are just too different to compare. The Mac and Amiga are valid competitors. Here is the best price performance leader, even when considering the new entries of the other in sales the ST is second. In features the Amiga may be the winner.

A person that requires IBM compatibility will buy an IBM or clone. That is why Atari is entering that market. If you feel IBM compatibility is a must you should not even look at an ST. However the ST is still Atari's flagship computer. Someday this will change when the TT comes to market. Then again the Atari machines will lead the price/performance market for even high power machines.

The author of the preceding article discussed multitasking. This is not fair in his comparison on IBM to ST. First multitasking on the IBM, like the ST is a kludge. Several products have hit the market and none have gained popularity. Instead users prefer the two most common used items to be available. A RAM disk and print spooler. These are available on both machines and one cannot say one is better than the other. Both operate as background processes. In my decision to buy an ST I decided that multitasking was not needed. Multitasking is for multi user environments and although a limited use of it like spoolers is good for the home market I would rather have the speed advantages of a dedicated machine.

Items like the Blue Box, the TT machine and the CDROM are still being engineered at Atari. They do not want to release bugged machines, plus they do not wish to be known for high prices. The CDROM will be available when Atari can offer it at a price below the competition. The TT will feature Unix system V. A true multiuser, multitasking environment. This is an operating system that is much more powerful than PCDOS, but in some ways harder to use. It will give the user of the Atari TT micro power and capabilities presently reserved for mini computers costing thousands of dollars more. Like the previous article it is tiresome waiting for new more advanced products to come but I'm sure they will. I would assume however from the comment of the article that the TT should run IBM software. I for one hope that it doesn't. Let's leave multitasking to where it belongs. In corporate offices and business, not in very small business and in the home.

Expansion. Here IBM and Amiga are clear leaders. The TT will likely have slots for it. The problem is that this type of expansion is machine dependent. Sometime in the future the expansion will go by the wayside along with the machine itself. Atari has taken a differing stance and I agree with it. Using a DMA bus rather than a processor dependent bus will provide expansion capability that can be retained when the processor replaced with a new machine. In today's world the cost of making intelligent peripherals is minor when compared to designing dedicated ones. It is true that manufactures have not yet grasped this concept, but I for one look forward to the day that all peripherals have their own intelligence. In this field some day I feel Atari will be named as a leader in innovation. Intelligence DMA peripherals would be better than today's present bus restricted add on cards. It will require patience, but someday it will be the norm. It may not be as easy as plugging in a card but the ST can be expanded. A 4 meg 520ST is easier than most people think. Atari promised that the early ST owners would have the benefits of all new Atari developments, and so far that has proven true, although not always simple.

In conclusion, I do not believe the Atari ST is the best computer, I do however believe it is the best value available today. I do not feel that IBM compatibility is needed, and will not object seriously if it is never available. If I need IBM compatibility I should buy a IBM PC or clone. If I want the best the market offers then I'll buy an ST. The two machines really are not comparable because they are so different. The market is different. Never will any one computer be the best for everyone. Let's remember that. The IBM is a good system, although technologically backward. It is in the position of CPM a few years back. Sometime in the future others will take its place. My bet is that the 68000 series will someday be the leader, then a few years later it will be replaced with something else, with technological advances that we can only dream about today.

Let's stop comparing apples with oranges. Let's simply focus on the advantages or disadvantages of different systems for our personal needs, and then make intelligent decisions.

The previous author is right in his own mind. In the mind of others he is wrong. The truth is somewhere in between. I do not care if Atari is ever the leader, as long as they continue to offer good products at excellent prices. Being the biggest is seldom being the best. There will always be cheaper, and more expensive products. There will always be better ones. We must decide for ourselves what we want and learn to be comfortable with it. As long as people are different debates will go on.

ATARI
ST
COMPUTERS
"POWER WITHOUT THE PRICE"

TIME BANDITS HELP

There is more to the game than you think.
BY MIKE BLACK - alias Dip Switch

SPACE SECTOR

Excalibur: Passwords for levels 1,2,3: Level 1--DEATH
Level 2--? Level 3--? Short out the Klingon
Computer by filling a line with lots of: <><><>
(They will look like lightening bolts.) Write
down all coordinates!

Darkside Dare: Highest level completed: 1C. Little is known
about this zone or its reason for existence.
This is a very hard level.

Welkin Island: Highest level completed: 2D

TECH SECTOR

Omega Complex: Highest level completed: 4D.
NO ARTIFACT FOUND

Major Hazard: Highest level completed: 3A.

Gridville: Highest level completed: 3C.

EGYPTIAN SECTOR

Sentinel: Find the ANKH on level 2A. It is needed to read a
scroll in the Guardian, and is used to enter 3A on Cheop's.
Highest level completed: 3A.

Cheop's Curse: To enter level 3A, you need the ANKH
from the Sentinel. To enter level 4A, it asks for another item.
There are rumors that it is the SCEPTOR found on 2B of the
Guardian. Master the traps in the altar room (levels 4A-D) to
get the Artifact. Highest level completed: 4A.

Guardian: Read the scrolls every level to find info on THE
DOOR. A GOLD SCEPTOR is on level 2B. Indiana Jones'
map is full of @#\$.%

MEDEIVAL SECTOR

Arena: Highest level completed: 3C.

King's Crown: Highest level completed: 3B.

Castle Greymoon: You can reach the Mad Hermit on C
levels by using the four warpers. His Games' solutions are
as follows: Clubs--TORCH, Hearts--BLOOD,
Spades--GRAVE-DIRT, Diamonds--? To get the blood, give
wine to the shepherd. Be honest! For grave-dirt, use rubble
at the grave. At the unicorn, answer the questions:
NO,NO,NO, YOU. Highest level completed: 4D.

Artifact recovered 11/10/86

WESTERN SECTOR

Old Bomb Factory: Highest level completed: 2C

Hotel California: Highest level completed: 4C

Ghost Town: On most levels, be on the lookout for ghosts.
They lead you to them! The combination to the safe is in a
book on around level 3A or so. There are nine letters and
they form a word when unmixed.

CITY SECTOR

Timegates Signpost: Used to keep track of the areas that
you have been to. It is also the only place where you can
load and save the game.

Shadowland: This zone resembles PAC-MAN, and its only
main purpose is to gain you points. On level 4D, the
Shadowland Artifact, a red ghost, appears. Highest level
completed: 4D.

Artifact Recovered 10/21/87

LAWS OF COMPUTER PROGRAMMING

Author Unknown

1. Any given program, when running, is obsolete.
2. Any given program costs more and takes longer.
3. If a program is useful, it will have to be documented.
5. Any given program will expand to fill all available memory.
6. The value of a program is proportional to the weight of its output.
7. Program complexity grows until it exceeds the capability of the programmer who must maintain it.
8. Make it possible for programmers to write programs in English, and you will discover that programmers cannot write in English.
9. Software is hard. Hardware is soft. It is economically more feasible to build a computer than to program it.
10. An operating system is a feeble attempt to include what was overlooked in the design of a programming language.

TYPE IN THIS PROGRAM AND GO TO JAIL

COMMENTARY ON SOFTWARE
COPYRIGHT AND PIRACY

by Dennis Hevener

Reprinted with permission of *ST Applications*, The Atari ST Journal

In a recent issue of an Atari magazine that caters to both 8-bit and ST users was an article and type-in program that really interested me. So I bought the magazine. After reading the article thoroughly, I became really jazzed about the project described, and immediately called the publisher with intent to purchase the program on disk. I hate typing. I was told that the ST program was only available on 5 1/4" 8-bit format, but the disk came with instructions for transferring the program to the ST. Lacking an 8-bit Atari, it would take more than instructions to get the program on my ST. The publisher did say that the program would be available on 3.5" diskettes in the future, but I'm 28 years old now, and due to my health, I doubt I'll live more than another 75 years.

Asking around didn't scare up anyone who could help me convert a 5 1/4" disk, so I looked into typing in the program myself. The program is written as assembler, is very long, and worst of all, requires linking to some routines only available from the Atari Developer's Kit. NO PROBLEM, I would type it in, send it via a BBS to someone who has the developer's kit, and he would compile and return the finished product to me. BUT BETTER READ THE FINE-PRINT LEGALESE FIRST...

Right under the listing of type-in programs on the first

page of the type-in section, I read "NO PART OF THIS PUBLICATION MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM..." Wow! You're not supposed to even type in this program for your own use, much less collaborate with someone else to share the labor and the benefits.

Finally, someone offered me a bootleg copy of a coveted program that someone else had converted off an 8-bit disk. I accepted! No lectures on the immorality of piracy from me! Now, to ease my conscience, I could go buy my own copy of the 8-bit disk, but I would still be a criminal as far as the publisher is concerned, so why bother?

I relate this episode to you to illustrate the paranoia of some software suppliers. Don't misunderstand me, I do not condone piracy. EXCEPT for the aforementioned program, 100% of my software is either public domain or purchased by me. I work for a software development company, and my paycheck depends on people paying money for my employer's software. However, I am really unhappy about the restrictions publishers place on their software, restrictions that do themselves no good and alienate the user.

I wish to make the following points:

1.) Copy-protection doesn't work and is an inconvenience to legitimate users. For instance, *Sundog*, a very fun and popular game, is copy-protected, and even worse, it will not run while write-protected. Sooner or later, I know I will accidentally save something to my *Sundog* disk. Fortunately, *Sundog* and all of my other copy-protected software is easily copied with *ProCopy*. Sooner or later, (usually sooner,) someone will find a way to duplicate any disk or cartridge. The copy protection scheme can't be too sophisticated, because the publisher must be able to copy masters to make production copies!

2.) Some piracy is inevitable. There will always be a few who will do anything to avoid paying for their software. Their motivation is usually not economic. They do it for the thrill. I think these people are in the minority and will not do great damage to software suppliers. I believe most piracy is done by basically honest people, who "BORROW" a copy of a friend's program to "TRY OUT." Others copy friends' programs with no intent of buying their own at a future date. They rationalize their actions by saying, I'M NOT HURTING ANYONE, BECAUSE I WOULD NOT BUY THIS PRODUCT EVEN IF I DIDN'T HAVE A COPY." I do not believe that moralization and threats by software suppliers will stop this type of software sharing. Software piracy laws are unenforceable for the most part.

Therefore, software suppliers must realize that they cannot stop all piracy, and rather than wasting effort sending pirates on a guilt trip or making idle legal threats, they should take positive steps that will benefit legitimate owners instead.

Here are the ultimate weapons against piracy. I am happy that many suppliers of ST software are doing many of these things. Others, well...

1.) Provide uncopied software, along with a courteously worded statement explaining that the software is provided for your use only, and distributing copies hurts all users. This creates a cooperative rather than an adversarial relationship where the user must fight the publisher to obtain or make a legitimate archival copy.

2.) Provide good documentation and support. An example of

piracy - preventing a documentation is that supplied with *Flight Simulator*. The textbook on flight principles alone is worth what the program costs on the discount market. Furthermore, it is too large to photocopy easily.

3.) Provide good pre-sales information on the product. When people are in the market for a particular type of software, and have several products to choose from, they often resort to "BORROWING" a copy of each product for evaluation. I have found it very difficult to get information on products. Dealers usually know very little about specialized products. The advertisements are there just to whet your appetite. Magazine product reviews are all too often a summary of the product's features, rather than an in-depth analysis of them. Calls to the inaccurate information. I love demo versions of software -- such as *DbMan*'s, which is fully functional except that it will not allow more than a few records per file.

4.) Provide frequent upgraded versions, with a generous update policy for registered owners.

5.) Charge a fair price for products. I believe that many publishers are not maximizing their profits because they are charging too much. Products such as *DBASE III* and *LOTUS 1-2-3* would be useful to many, many home users, but are so expensive that only businesses can afford them. Suppliers for ST business software are generally good about this. I use *DbMan*. It is an excellent product. Support is excellent. My cost: \$75.00. At that price, I was not as tempted to fine a bootleg copy as I would have been if it cost \$400.

I believe game publishers in particular could increase their profits by charging less. I have spent a total of \$56 on the discount market for 2 games. If games cost \$10-\$15 each, my total expenditure on games would be much more. There are a lot of games out there that I would like to have, but they are not worth \$25 to \$30 to me. If a friend offered me a copy of one of these games I wanted, I would have a hard time refusing.

6.) Finally, I wish magazines would quit printing long type-in programs, unless they are done to illustrate programming technique. If the goal is simply to provide the reader with another piece of software, the program should be provided on disk. I believe that magazines with disks could be provided at a lower cost. I buy DSDD diskettes in quantities of 50 for less than \$1.70 each. I see no reason why a magazine with disk could not be sold at a good profit for \$8.00 or so.

The magazine publisher could also sell space on the disk to software vendors for distributing demonstration programs. Can you think of better advertising than this?

If magazines are going to print type-in programs, they should not object to people storing them in "INFORMATION STORAGE AND RETRIEVAL DEVICES", or distributing copies of their labor to friends.

In short, I believe that positive reinforcement will be more effective in curbing piracy than any threatening legalese can ever be. Until this happens, see you in jail, where you are allowed to have a computer or a type-in program, but not both!

PANIC IN DESKTOP PARK

Confessions of a Desk Accessory Junkie

by Ken White

Courtesy of ASTUN (Atari ST User's News) March 1987

Okay, so six months ago, I didn't know nothin' about desk accessories. A desk accessory was like a paper clip, or maybe one of those magnetized things that hold the paper clips in cute little circles around the magnetic hole thing. Now THERE'S a desk accessory. I was a babe in the desk accessory woods.

Of course, I didn't have an ST six months ago. I was clean. My old 800 had a lot of "things", but it didn't have any desk accessories. Not a one.

Then circumstances changed and I developed a need for an ST professionally. Like a big sucker, I went in wondering about how I was gonna like using the mouse, or how the megabyte of memory I was getting would change my writing style, since the biggest text buffer I'd ever worked with was about 22K. Nobody bothered to mention the "side effects" of desk accessories, and I didn't know enough to ask.

I started off on the soft stuff. The control panel, the terminal emulator, and the printer installation accessory were my only neighbors under DESK (on the menu bar...). Yeah, so I didn't have a modem yet, or a printer. But I could sure change those colors. I never realized that there were color combinations that would make you think you were a reincarnation of Jayne Mansfield.

After a while, I started reading about *Thunder!* from *Batteries Included*, and all the reviews made mention of the fact that there was an "accessory" version that would check my typing WHILE I WROTE for spelling errors. Well jump back Jack! That sounded pretty good to me. I got it.

Then somebody started telling me something about *Cornerman*, how it had all these things available as an accessory, everything from a dialer and a notepad to an on-screen digital clock and a calculator. Just one click of the mouse and there you were.

Well, that sounded pretty good to me. All that stuff in an accessory. Didn't need my notepad next to the computer or that calculator that used to be in the drawer before it deserted me and went to Honduras to join the Contras. So I got *Cornerman* too.

Wasn't I the smart and lucky one. There I was, with my little word processing disk (*Cornerman* and *Thunder!* resting comfortably under (The DESK) and with my little telecommunications disk (*Thunder!* and *Cornerman* under that DESK too - wouldn't want to misspell a word while composing a message with *Flash's* built-in word processor, would I?). I was truly happy as a pig in whatever it is pigs are happy in.

For a couple of weeks, I was okay with my little package of desk accessories. I used them every day, and was completely satisfied. Then, I went on *GENIE* (*General Electric's* answer to *CompuServe*) and I happened to see that they had a whole download library devoted to "desk accessories". Obviously, I had to take a look....

When I'd finished scrolling through the fifty or so desk accessories available to me there, my hair must have looked

like something Don King would be proud of. There were ALL KINDS OF DESK ACCESSORIES!! Everything from RAMdisks to things that did things I didn't even understand. All free for the taking.

I started small. Downloaded a calendar (dumb little thing that brings up a calendar, month by month, from January 1980 right on through the next century... you got married on February 19, 1983? Hey, that was a Saturday....), a clock (yeah, so I had enough clocks on *Cornerman* to rival the little Hungarian clockmaker down the street... but this one can be... well, altered. Changed in form... Hello, Dali, if you know what I mean...), a scientific calculator (I know, I had one of those with *Cornerman* too, but you never know when you might need JUST a calculator available on your disk, right?) and a stupid little 3-D maze game called *Minos*.

Oh boy, I was really cooking. I put calendars on my word processing and telecommunications disks and filed the rest of the accessories away on a new disk labeled appropriately enough, "Desk Accessories". The monkey was beginning to climb up my back.

The next night, I was back on *GENIE* again, searching through the desk accessories download library for additional accessories that I might imagine, I found a couple.

How does a little accessory that tells you how much free RAM you have in your computer sound? Or maybe a little item called *Tiny Tool* is more to your liking - it's a combination disk sector and memory examiner and editor. Now personally I don't have a whole lot of use for something like this, and I'm not sure why I downloaded it (no, you can't have a banana) except it sounded interesting - I also felt there was a possibility that I might wake up one morning after a vision that explained the meaning of short non-words with dollar signs and other funny stuff in them.

And then there's the *Word Window*. The *Word Window* is a fairly full-featured word processor IN A DESK ACCESSORY. Yes, if you thought you needed to boot up your favorite word processor to write that letter to Mom, (or to the credit card company), you thought wrong. Just swing your pointer up to the DESK menu item, click *Word Window*, and you've got a word processor that will give you the power to edit, move blocks of text, save files, print files, embed printer codes, and do just about anything you might want to do with a text file. It'll only deal with documents of approximately 32K (80 columns of text by 400 lines), but I wrote a BOOK with *AtariWriter* and a 22K text buffer... and *Word Window* has more features.

Read some more about the ST. Hmmm, a RAMdisk accessory might be real nice. Create a RAMdisk at bootup, so it's there and ready for me whenever I need it. And they come in sizes ranging from about 78K up to 709K. Okay, you don't have to stare at me disapprovingly - I downloaded a variety of sizes, for different occasions.

I was in full-scale accessory addiction by this point. I stopped looking for interesting new accessories and started thinking about what kind of accessories I WANTED. I hunted and dug around, looking for an accessory that would allow me to format disks and do basic DOS-type functions without exiting my application programs. After a week, I found *Disk Manager*: Format disks, delete files, create folders, all kinds of useful stuff. I grabbed it.

I've managed to calm down over (the last few days - I

spend my time moving accessories from disk to disk, then booting a disk up and seeing how I like it. It's not that my lust for accessories has cooled; rather, I have enough accessories to play with... for the time being.

I was on *GENie* again tonight... didn't notice any new accessories... I sure hope somebody writes another good one real soon... or I'll have to give *CompuServe* a call and see what THEY'VE GOT..... a man's gotta do what a man's gotta do....

XE CONSOLE KEY FIX

reprinted from *Current Notes* March 1987

The following fix for intermittent or complete failure of the HELP, START, SELECT OPTION and RESET keys comes from an *ATARI Technical Advice Notice* dated July 25, 1986

According to ATARI, the problem is caused by excessive voltage drop in the keyboard and the keyboard connector (J8). This is caused by oxidation or contamination of the metalization film on the flex circuit.

The ATARI recommended fix may be accomplished by proceeding as follows:

1. Remove the flex circuit from the edge connector (J8).
2. Carefully remove any oxidation or contamination from the metal film (side with circuits in black). DO NOT USE EXCESSIVE FORCE, AS THIS WILL DESTROY THE TRACES.
3. Shim the non-conductive side of the flex circuit (silvery colored side) with any material. It should be .002 - .010 inches thick (scotch "magic" transparent tape will work).
4. Remove R95; a 220 Ohm resistor to pin 2 of J8.
5. Replace R95 with a 1K Ohm 5% resistor.
6. Replace shield and reinsert flex circuit to J8.
7. Reassemble and test keyboard and computer functions.

The cleaning and shim will minimize the recurrence of the poor contacts. The resistor change lowers the LED drive current and thereby reduces the voltage drop across contacts thus eliminating the problems.

TOM AND JERRY VISIT ICD

by Jerry Cross and Mike Lechkun

reprinted from *Magic*, Warren Michigan

Oh well, Mike's lousy mouse joke at least got us in the door and to the receptionist. We entered an old textile factory on a bumpy road on the south side of Rockford, Illinois. The building's reduced demands allowed it to house small, emerging businesses. This is where *ICDs* resides.

After the aforementioned bout with the receptionist, we were greeted by Marilyn, one of the executive secretaries,

and were shown the main office. This office house other secretaries, accounting and art departments, and programmers. Sitting on a dresser in the middle of the room was a *520 ST*, *Courier 2400* modem, disk and hard drives-- in short, the *ICD BBS*. That's where the fun started! We were introduced to staff programmer Keith Ledbetter, Keith of *Express!* fame, showed us his first products for his new employer. *ICD Express!* (we think that was the title) is an ST BBS program that will knock your socks off and send them across the room! It's really that good! The program is a mixture of features found on *850 BBS Express!* and some major on-line services. Written in a language composed by Keith (also to be released as soon as it is documented), *ICD Express* is a caller's dream yet not a Sysop's nightmare. In the download section, a user can scan the list of available files, or view each filename followed by a brief description. Arc'ed files can be unarc'ed on-line to view separate files contained in the master file. The sysop may set a variety of flags restricting/allowing different privileges to individual users. Standard X-modem, CRC X-modem, and Y-modem are the protocols supported. "Kermit's batching allows some users to type in ""." an ddownload everything, and I'm not too keen on that," said Keith. 32 message bases can be created, with a maximum of 250 messages each containing 4000 bytes of information. This will cost you over a meg of memory, but that's the breaks-- get a Mega ST when they come out! Thread following, tagged messages, and a new on-line text editor makes this message area complete. I thought the suggested retail of \$79.95 was reasonable, Jerry thought it a bit too pricey. For *ICD's* first foray into the ST field, this seems an excellent product in the tradition that *ICD* has established.

After Mike got up off his knees in worship to Mr. Ledbetter, the tour moved on. Up an escalator and through a vacant machinery room we went, Marilyn left us in the capable hands of Brad, head of shipping/handling and production. Stacks of untested, incompleted MIO devices were about the room. Each MIO is tested from 9 to 24 hours for reliability before packaging and shipping. This commitment to quality along with *ICD's* excellent consumer support has forced them to expand three times within the warehouse. Surely a fourth expansion is eminent. When Jerry complained of a lack of quality service on non-*ICD* equipment in his area, Brad rather matter-of-factly said "Send it in to us - Tom (Harker, *ICD's* President) will look at it." *ICD* routinely assists with all installation of their products at reasonable fees. *ICD* installs *Rambo's* (memory upgrades) and *US Doublers* (1050 drive enhancements) for \$30 and \$15... they'll look at user's equipment as well when their own products checks OK.

After being frisked for any free sample MIO's (just kidding), our tour ended. In spite of the grubby factory style surroundings, *ICD* is a company committed to dependability to all Atari owners. This is one book you can't judge by the cover!

8-BITARC QUESTIONS

by Ralph Walden, ACE BBS Sysop (503) 343-4352

reprinted from the *ACE Newsletter*, May 1987

The following is a list of the most commonly asked questions about the 8 bit version of ARC and ARCX.

Q: When I run ARCX, the disk drives run, the screen goes

off, and then nothing happens. I have to hit System Reset to get out of it.

A: ARCX does as much work in memory as possible. This means a long time can go by before it actually starts writing to your disks. Let ARCX run - if two minutes go by without any activity, then you have problems.

Q: When I deARC the file, it has a duplicate 128 byte block at the end?

A: ARC and ARCX have no concept of "blocks". If you get a garbage block, or a duplicate block, then the person who ARCD the file had a bad file to begin with. This commonly occurs when a terminal program and BBS don't agree on how to end the file transfer.

Q: Since almost all files are "squeezed", wouldn't it be easier just to forget about the "stored" and "packed" method in order to speed up the ARCing process?

A: The "stored" length is the actual file length, so very little calculation is done to get this value. All input is "packed" before being "squeezed". The result is, all three types of compression are known as soon as ARC calculates the "squeezed" length with no additional overhead. I have tried "squeezing" an unpacked file and it ends up larger.

Q: Couldn't you make a special 130XE version so you can add the "crunched" routine to the other three?

A: I could, but it doesn't make much sense. It will eliminate the possibility of a 64K RAM disk, tying the entire I/O to floppy disks. Between this and the constant swapping of bank memory will make a very slow ARC. On the ST I implemented a more efficient version of "crunched" than the standard ARC found on ST's, IBM's, etc. The result is a full implementation of "crunched" with no need for the "squeezed" routine. The problem with "crunched" is the need for a 30K buffer area. It could be reduced by 5K by using a 3 byte data type, but neither C or any other 8bit language supports a 3 byte data type. This means, I need to do it in assembly. There are other problems, though less severe such as the need to do long integer division, having to use note and point to fill in the header information, etc. Needless to say, it is not a project I relish doing. I am implementing the "crunched" routine in assembly on the ST, and when completed I will at least consider porting it over to the 8bit.

Q: Could you implement a version to allow the user to swap disks?

A: I could, but it's not practical. You'll have to swap disks 15-20 times to extract a full single density disk. You will not find many ARC files which cannot be extracted on a single density disk, and this is reduced even further if the "crunched" routine is used. For example, the ACE BBS which has about 4 megabytes of 8 bit ARC files, only has 1 file which cannot be extracted with a single density disk.

Q: Would ARC and ARCX be faster if they were written in ACTION?

A: Probably not. ARC uses recursive function calls (the function calls itself) which is difficult to do in ACTION. Most of the time critical functions are written in assembly, which is faster than ACTION. Even rewriting the entire code in assembly would have little speed improvement over version 1.2. The main limitation now is the speed of the disk drives and the speed of the microprocessor. Currently, ARCX is about 9 times slower than ARCX on the ST. That's pretty good when you consider the disk drives are 10 times slower, and the microprocessor is 6 times slower.

In the works, I will at some point in time be writing a program to allow you to list the filenames and their sizes within an ARC file. This will be quite efficient when used under SpartaDOS which has a better note and point routine than Atari DOS. If used under Atari DOS 9or compatible), it will require reading in the entire file. I will be doing an ARCX with query, where you are asked for each file as to whether you want to extract it or not. If enough people request it, I can also implement version of ARC and ARCX that require password to extract the file. I may, at sometime in the future, write an ARC program completely in assembly in order to implement the "crunched" routine.

INTRODUCING THE 8-BIT SIG VP...

Chris Reich

I want to extend my gratitude to the members of the 8-BIT SIG for electing me the new 8-BIT SIG Vice President. **David Eichel** is to be congratulated on the job he has done for the eight-bit users this past year.

For the benefit of those who don't yet know me, I offer this brief biography. I am in my very advanced 20's, and am employed at *Harris Corporation*, a local electronics manufacturer. I started there as a Field Service Representative, a job which took me to almost all parts of the world. My present position is Technical Instructor, and this job has taken me to the other parts of the planet that I missed before.

It was on one of these trips that I met my wife, Maribel, who has given me (so far) a daughter, now four, and our newborn son.

My first introduction to computing was as a freshman in high school, working with a DEC PDP-8 minicomputer with teleprinter machines for the user interface. We stored our programs on paper tape. I was quickly engrossed, and used to sneak out of study hall to use the computer. So convinced I was that computing was going to be a way of life for me, the next year I enrolled in the secretarial typing course so I would be proficient at a keyboard. It was a decision I have never regretted.

I bought my first computer, an Atari 800, in January of 1983. There are a few people around who paid more money for their Atari systems, but not many. I am as enthusiastic about the Atari computers as I was when I first bought it. Soon after, I volunteered to be the librarian for **ACORN**. In those days, the club had the name of one of the local computer stores which used to deal in Atari equipment. The organization of the eight-bit library, with the different categories of files, was done by me in those days. I also adopted the original version of the **ACORN** directory program from a type-in program. **Bob Wilson** and **Nick Cup** have since maintained and expanded on the system of organization I originally developed.

In 1984-85, when nobody was sure of the future of Atari, **ACORN** almost became forgotten history. In a last ditch attempt to save what many thought to be a sinking ship, **Dave Vogel** called a meeting in March of '85 to evaluate the

situation. Out of that meeting came an interim slate of officers, who were re-elected in June of that year. Those of you who were with us then recall that it was then I became ACORN President.

During my presidency, the membership grew 400%, the program library grew 350%, and the treasury grew 300%. We instituted the disk of the month, the annual mass-disk copy, and the auction. I have no less ambitions for the 8-BIT SIG this year.

I am applications-oriented. That is, I don't believe in computing for computing's sake. I use my computer for financial calculations, checking account management, letter-writing, skill development for my children, and for game playing. Yes you read that correctly, I play games on my computer. (In fact, one of the primary reasons for purchasing the Atari computer in the first place was that it could run *Visicalc* just like the Apple computers, yet still provide a challenging game of chess with excellent color graphics and an easy user interface.)

My other interests include amateur radio, photography, and gourmet cooking. I love music of almost any kind except avant-garde jazz. I have a large stamp collection, and collect recordings of Harry Belafonte. Quite naturally, I am always searching out new ways to use the computer to enhance my enjoyment of the other aspects of life, and welcome the opportunity to involve myself with others who feel likewise.

I strongly believe in the value of education. ACORN has always tried to educate new users, and there has been varying degrees of success, but the time has come to get serious about it. I shudder to think about all the Atari computers gathering closet-dust. The Atari computers are the best educational tools that can be placed in the home; I will defend that statement on any level, and will expound on it more in future editorials.

I am strongly opposed to the distribution of commercially produced software. If you are involved in it, please stop. If you won't stop, don't ever tell me about it. I will write more about this topic in future editorials.

Future 8-BIT SIG meetings will be attendee-oriented. If you have a problem to discuss at Random Access, bring in the software or the hardware and we will find a solution you can take home, instead of a collection of conjectures and second-guesses. We will be interested in hearing about the good products you have associated with your computing experiences. Do you have some unusual application you have developed? Do you have some unusual application you would like to see developed? Do you have some crazy ideas about what a home computer is good for? I know I do, and by discussing these things together, we will have some fun, and who knows?... just maybe we will be pioneers in the next generation of computer users.

THE 8-BIT LIBRARY

by Nicholas J. Cup

I hope that you all had a good month, and that you enjoyed last month's disk. I'd like to thank **David R. Eichel** for letting me put his work into our Library. I think that is a fine example of music on the 8-BIT.

On to new business. I have been hoping to get a new update out to let you know what is new & exciting. The delay here is that I still have quite a lot of disk to go through and organize. Till then let me give you a hint of some of the things that have been added. (I'll try to bring in a list to the next meeting that you can all look at).

H11 & H12 - *TextPro 1.2a*

This is a fantastic word processor with a LOT power. (Including Macros). It is a double sided disk.

L09 - *MACHDOS 3.7*

Its a Density smart Dos that I think you'll like.

L10 - *ACE C*

The C programming language from ACE

Filled **A26-A27** with some of the newest games around.

Filled **B08-B14** with some good thinker, also a wheel of fortune type thats very nice. And a 4 disk side trivia game.

Filled **D11-D16** With *Movie Maker* (and player) files, plus digitized sound demos.

We've also added to disk **T10 Express 850** for your Telecom convenience.

Also check into the **ACTION** and M/L Source code disks for programs you can modify.

As for the **Disk of the Month**, we'll try for something a little more serious. It will be **U19**. I think you'll find many useful programs on it. So till next meeting take care.

TREASURER'S REPORT

By REID HOADLEY

OPERATING FUND

MONTH ENDING: JUN 30'87

INCOME	EXPENSE TOTAL	RUNNING	COMMENTS
*****		\$2370.19	BEGINNING BALANCE
\$45.00		\$2415.19	NL ADVERTISING
\$52.50		\$2467.69	MEMBERSHIPS
\$ 1.00		\$2468.69	MISCELLANEOUS
	\$ 69.98	\$2398.71	NEWSLETTER PRINTING
	\$ 62.00	\$2336.21	NEWSLETTER POSTAGE
	\$135.00	\$2201.21	MEETING ROOM RENT
????????	\$267.48	\$2201.21	
TOTAL		\$2201.21	
CASH ON HAND		45.48	
CHECKS ON HAND		76.50	
ST LIBRARY		46.93	
CHECKBOOK BALANCE		\$2032.30	
EQUIPMENT FUND		\$ 500.00	

FOR SALE

Atari 130 XE with all cables, manuals;
everything except the box. Asking \$85.
Call Tom Bellucco 254-8405, 458-8368.

THE ST SIG

Tom Bellucco, SIG VP

First of all, thanks to all ST SIG members who voted me as the new SIG VP. The competition was fierce and the voting was close. <big grin>

Now, onto business. The July ST SIG went very well, as there was participation from many different members. Maybe that's why the room became so *HOT*. For those members who missed this meeting, here's some of what went on:

During random access, it was mentioned that *GFA Companion* was released. I have since found out that it has been FINISHED, but not released. Scheduled release is mid-August. *GFA Companion* is a program that will allow you to create custom dialog boxes. It produces *GFA Basic* source code that you plug right into your GFA program. Suggested retail is \$49.95 I believe.

Bruce Nelson read on USENET that the public domain games *Monopoly* and *Mille Bourne* by **David Addison** are no longer public domain and should be removed from all bulletin boards and club libraries. *Parker Bros.* did not like how close the two games look to its own board games.

When you turn off your 1040ST, Atari recommends waiting at least 10 seconds before turning it back on. It seems that it takes that long for all the RAM to clear and for the system to "power down." There's no need to wait with a 520ST, and it is not known if the wait is needed on an upgraded 520ST.

It was asked if it is possible to add a no-solder upgrade to a 520ST that already had a homemade upgrade to get

more than 1 meg of RAM. Answer No.

It was brought up that Atari may drop the 520ST when the Megas are released. No conformation on this as yet.

There can be 112 files in the root directory of any drive. After that, folders may be used to add more files.

A new public domain program is on the way from **Simon Poole**, author of *Uniterm*. It works like *CHKDSK* on the PC, checking/repairing your disk FAT and releasing unused disk clusters. A pre-release found its way on the *Apex*, but a day later, I saw on *Genie* that this version was bug ridden and *VERY DANGEROUS*. If you have a program called *DLII.ARC*, or a program that sounds like the one described here, make sure it is a bug-free version!

Vin Arrigali gave a demonstration of *PC Ditto*, the new IBM emulator the ST, and the StereoTek 3D glasses. *PC Ditto* can run hundreds of PC titles, and Vin showed us *MultiMate* and *Lotus 1-2-3*.

The August ST SIG will include another educational Random Access session, and **John DeMar** of *QMI* is scheduled to appear and demo some of his ST products, including *DeskCart* and *ST-Talk Professional*.

As members, I encourage you to participate in the SIG! If you have recently bought a piece of software, please tell us about it during Random Access. Chances are someone else in the group is interested in that particular program.

See ya next month...

Tom Bellucco

"Your Software Connection"
(716) 458-8368

Another software clearance sale!

ST software:

King's Quest II - \$20

Timelink - \$20

ST Wars - \$20

GFL Football - \$20

Mindwheel - \$15

Essex - \$15

PM Interface - \$15

Label Master Elite - \$25

Publishing Partner - \$90

Swiftax (1986) - \$40 (get 1/2 off the 1987 version)

8-Bit software:

Conflict in Vietnam - \$10

Archon II - \$10

Blank Disks!

3 1/2":

Fuji SS/DD 20 pak with free case - \$25.00

Sony/Maxel/Fuji SS/DD - \$13/box

5 1/4":

Sony SS/DD with free case - \$8.00

STuff:

Monitor Master - Connect both ST monitors without cable switching; includes audio/composite jacks - **\$45.00**

DeskCart - Cartridge desk accessory, includes battery backed up clock, calendar, notebook, card file, calculator, typewriter, address book, VT-52 terminal, keyboard macros, ramdisk control, disk utilities, print spooler, control panel, screen dump, and memory test - **\$75.00**

THE "NEW" ATARI APEX ARCHIVES

by Tom Bellucco, ACORN

In the June *ACORN Kernel*, an article written by Vic Albino of *BRACE* was reprinted describing the Apex Archives, my "club" for obtaining public domain software. Vic wrote that particular article almost a year ago, and since then, a few changes have taken place.

Vic mentioned that I had started a club for the 8-bit users. This was true, but I have since sold my 8-bit equipment and no longer have the ability to transfer the software from my BBS to Atari formatted disks. There were only 2 8-bit members, and neither had ordered software in quite awhile. Because of these reasons, there no longer is an Apex Archives for 8-bit software.

The ST Archives are still going strong, though. There are currently 31 members and around 850 files available. The membership still costs \$10 and is still a one-time fee, but the disk prices have come down. Double sided disks are now \$2 and single sided disks are \$1. Add \$.50 if I supply the disk.

The format of the club has changed as well. Before, I would send you a complete list of the files available and you would choose the files you want and send me the list. Now, everything is organized onto disks. You can still order by the file, but I have divided each category into a number of disks which can be ordered using the prices noted above. The complete list is on disk, and consists of files containing descriptions and files containing disk directories.

Each month, you will receive a list of the files uploaded in the past month. You can then purchase the entire update for the price noted on the list, or order by the file using the same prices. The first update was sent out in July for June's uploads.

The entire set of files is available as well. The first 820 files fit on 26 DS disks. The entire set, including disks, costs \$55 and automatically enrolls you in the Archives. You then receive the complete set of files, and the lists of updates up to the latest list. You can then purchase the updates you want.

Vic mentioned that I guaranteed 48 hour turnaround. Now that I have everything organized onto disks, I can promise same day turnaround.

If you have any questions, you can send them to me via *ACORN*, or to the address listed below, or call my BBS at (716) 458-2638, 24 hrs, 300-9600 baud.

The Atari Apex Archives

\$10 lifetime membership gets you the complete list of files plus any updates, one free disk full of files (SS or DS), and monthly updates.

Full disk prices: \$1.00 for SS, \$2.00 for DS (add \$.50 if I supply the disk)

Update prices are listed on the update file list

Guaranteed 24 hour turnaround.

Current size - 850+ files on 28 DS disks

For more information, or to join, write:

The Apex Archives
c/o Tom Bellucco
52 Hamlin Street
Rochester, NY 14615

ST Hardware Review

The Astra System HD+

by Tom Bellucco, ACORN

I always wanted a hard drive for my ST. What stopped me from buying an *Atari* or *Supra* hard drive? Well, the main reason was electrical outlets. My system configuration is composed of 2 monitors, 2 drives, 2 printers, the computer, and a modem. Just being able to turn on my ST costs me 6 outlets. That's one full power strip. Where would I plug in the hard drive? Another reason was desk space. I just did not have room for another piece of equipment.

Enter the *System HD+* from *Astra*. This unit consists of a 20 megabyte hard drive and a 3 1/2" DS drive enclosed in one case. That means 2 drives, 1 power supply. If I removed my one SS drive, I'd have my 2 DS drives and a hard drive all using only 2 outlets. That I could handle.

My next concern was cost. I could get an *Atari* or *Supra* hard drive for under \$600. *Astra's* drive lists for just under \$1000. Did your eyes bulge? Then you know how I felt when I called *Astra* and found that out! I asked why the cost was so high, and got a very interesting answer. First I was told that this was 2 drives in one. I knew that. I also knew that I could buy a different hard drive for \$550 and another DS drive for \$200. That slick move would leave me with \$250 in my pocket and no room for a hard drive. But for \$250, I'll put that hard drive on my lap! I basically relayed that response to the *Astra* salesman on the phone. Then he hit me with his big guns. The *Astra* drive comes with a ONE YEAR warranty, 4 times longer than the other guys. Great, I thought, but I don't ever want to use the warranty. I want this drive on my desk from day one til the end. Before I could relay that message, the man said something like, "But chances are you'll never have to use the warranty." He told me the *Astra* drive is THE BEST BUILT hard drive available for the ST. He guarantees it! He then told me stories about how The Pointer Sisters and the Moody Blues use this hard drive on tour. You KNOW they're putting it through hell! He also explained how he was showing it off at the Buffalo show. He told me that he would pick it up and move it around while the drive was being accessed. Anyone who knows anything about drives knows that is taboo! I didn't see him do that, but I did speak with a few people who did see him do it. He then went on to explain how they used only the best components to make this drive, etc., etc., etc. So, this was all talk. Should I get the drive? Well, I was convinced. I ordered the drive.

The drive arrived the next day (UPS Red Label, of course). I quickly removed my SS drive from my desk and made room for my new toy. I placed my other DS drive on top of it and plugged everything in. Away we go! Included in the box was a folder with about 10 pages of documentation, the warranty, and a sheet with the results of the pre-ship drive tests. The drive came partitioned at 2 10meg drives, C & D. It came with a disk with the hard drive init program on it, as well as a backup program, and a hard drive park program. The init program must be placed in an AUTO folder, the backup program is used when you wish to make a backup onto floppy of everything on the hard drive. The park program is used when you are shutting down the system. It places the drive heads far away from the actual disk platters so no harm can occur if the drive is moved around.

After a month of use, the drive has given me little trouble. At one time I became a bit upset when drive A would

not boot, and drive B did not exist. A quick check of cable connections revealed that I had not securely connected the unit to my ST. Since that day, I have had NO problems whatsoever.

As of this moment, I have approximately 5 megabytes of software on the hard drive. I still keep most of my software on floppies, but the most used programs including ST-Term, Publishing Partner, GFA Basic, and Personal Pascal run perfectly fine from the hard drive.

There's probably not much I can say to make you pay this kind of money for a hard drive. For me, it was worth it. I now have 2 DS drives and a hard drive that only use 2 outlets. The word is out that Astra will be making a hard drive without the DS drive built in. I would tend to think this would reduce the price by about \$200-\$250 dollars. The hard drive itself will STILL cost more than the Atari and Supra hard drives. Why buy the Astra? I asked the Astra salesman what was wrong with these other drives. His reply? "They're garbage." He said that the first Supra hard drives were built very well, but then Supra decided to go into a price war with Atari. They had to cut costs, and the first things to go were quality components. The Atari drives, he said, were doomed from day one. Atari has always been known to keep quality low to keep costs low. According to him, the other drives will be lucky to last more than a couple years.

LETTERS TO THE EDITOR

If you have any ideas on how to make A.C.O.R.N. better, or if you have any complaints we would like to hear about it. If you have a question about software, hardware, games, languages or anything else that you have a question about, then send us a letter and we will publish it in this column and try to get a answer to your question.

Dear fellow Atari owner,

I participated in a GENie tele-conference on Wednesday, July 1 in which a few people expressed concern over the ever growing piracy problem. Randy Mears, author of *InterLink*, the author of *Carina BBS* software, and a man from *TimeWorks* all mentioned how piracy has caused harm to their business. Bill Teal, author of *PC-Ditto*, told another member of the conference how he had seen PC-Ditto on numerous bulletin boards only days after it had been released.

As a responsible person and computer owner, and being a member of a responsible computer users group, I'd like to take this opportunity to ask everyone reading this letter to help stop piracy. I have taken a vow never to take or give another piece of copyrighted software, and I'm asking you to take the same vow. I've also formatted any disk full of pirated software I ever owned. I found myself with a bunch of disks gathering dust! The only software I ever used was the software I bought. The rest was there "just in case..." In case of what, I don't know.

If we can show the software manufacturers that we are willing to pay for software, we will be rewarded with MORE software and lower prices! Piracy has almost ended the life of the Atari 8-bit line of computers. It almost ended the existence of 8-bit support on the Apex BBS.

Do your part. Don't trade pirated software! Don't participate on pirate BBS's or in trading parties! Get

rid of any pirated software you never use! Encourage others to do the same! If we want our computers to survive, we must show that we are willing to support them by buying software, not stealing it.

Tom Bellucco

HOW TO SET UP 850 EXPRESS TO AUTOANSWER AND AUTO SAVE INCOMING TEXT OR DATA

More and more people are buying personal computers and a fair percentage of them are purchasing modems. Electronic mail is not just a thing of the future or just for the wealthy. You can set up your own "electronic mailbox" and receive mail while away from home or sleeping! Let me explain...

I live in Florida and the rest of my family is scattered across the Eastern United States. Many of my family members own personal computers and modems so we send text files to each other instead of letters...and the best news is that it is often less expensive than the mail service. I have been communicating with my family for about two years in this fashion and find it highly reliable and rewarding, plus it is immediate! When I get up in the morning, the first thing I do is turn on the monitor to see if any E-mail has come in. If so, I immediately save it to floppy, even before I read it so nothing can happen to it.

At first, we were using MPP 1000's because their software supported unattended downloading. But soon I grew tired of 300 baud and purchased the Supra 1200AT which also supports unattended downloading. That software however did not support the 512K Ramdisk on my XE, so I began to look for other software for this purpose.

In my opinion, Keith Ledbetter's *EXPRESS!* is by far the best telecommunications program available. I began to wonder if this fabulous program could possibly be set up to autosave to buffer or to disk unattended. Nowhere in the 850 Express docs was there any mention of this so you can imagine my excitement and happiness to discover that 850 Express could indeed download and save while no one was around! And...wow, is it easy to do! Here is how:

Boot up your 850 Express! modem program (I use version 3.0, I don't know if earlier versions will support this) and turn on your modem. From the main menu hit ESCAPE (which forces the program to think you're on line) and then press OPTION (which saves anything that comes in to buffer. Set up this way, as soon as a call comes in, the modem will autoanswer and save to buffer any incoming text. To check to see if any file has come in, simply turn on your monitor (I also hit the SPACE bar at this point to prompt the computer out of the attract mode...ie...changing colors, etc.). If text is on the screen, hit START to go the the main menu and save the buffer to floppy. This will clear the buffer so now just view that file from the floppy or read your mail from a word processor.

This has been tested on the Supra 1200AT, Avetex 1200 and Avetex 1200hc and should work the same on most Hayes Compatible modems. To test your modem to see if it will indeed work in this fashion, turn your computer and

modem off, turn your disk drive off and your computer back on so only the READY prompt of BASIC is showing. Turn your modem back on as if you were going to use it. Now have someone call your number. (If you live in Pinellas County and have GTE telephone service you can dial your own number, wait for the recording saying that you've dialed your own party line and hang up). If your modem answers the phone without having a program to tell it to do so, then it will work perfectly as described. If, however, your phone rings and your modem does not respond, you may have to command it to auto answer in this way:

From the main *850 Express* menu, choose ASCII (not ATASCII) translation. Now hit ESCAPE and with your modem turned on and ready to receive data, type ATAA. Then hit RETURN. (This in all Hayes Compat. modems commands the modem to autoanswer). Now, hit OPTION to save any incoming info to buffer and you're all set. Remember, in this configuration you are saving to buffer so the size of your buffer depends on the DOS you are using.

Here are my experiences:

ATARI DOS 2.0, 2.5 gives you 3328 bytes

Spartados 3.2 gives a buffer of 4608 bytes

Spartados 2.3 gives the largest buffer of 8064 bytes, big enough for most all your letter capturing needs.

For those of you who expect great volumes of incoming text, you'll want to save direct to ramdisk or floppy disk. In order to do this, you must fool the program into thinking it is on line while you set this up. Here is how you do this:

Most Hayes Compatible modems have dip switches. On the *Avetex* and *Supra* modems you would push switch #7 down. This is the CD (forced carrier detected) switch. On the above mentioned modems, the down position is the "on" position. With the CD switch activated, the express programs thinks it is on line. It seems to do no harm to leave this switch on while waiting for a file to come in. Just be sure you return the switch to the off position before making your next call or you'll get a false "connected" indication. Keep in mind that this switch need not be turned on when auto saving to buffer.

So, to auto save to disk, turn on your CD dip switch, hit ESCAPE from the main menu to force terminal mode, hit START to re-enter main menu, type "T" to capture to disk. You'll be asked to give it a file name and as soon as you do and hit RETURN, you'll be all set to save to disk. Do not hit OPTION to auto save to disk, autosave is already turned on by choosing the "T" function. Plus, you can always tell if autosave is on just by looking at the border color of your screen.

Things to keep in mind:

1) Whenever you are sending directly to another computer, you MUST use HALF DUPLEX. Use full duplex only when communicating with a BBS. If you are setting up to auto receive, it is preferable to be in half duplex but it is ABSOLUTELY necessary for the sending modem to be in HALF DUPLEX.

2) It is probably best to use the standard ASCII translation unless you know for sure that only ATARI computers will be sending you files. In that case use ATASCII. No harm will come however if someone sends a text file to you in ASCII and you are receiving in ATASCII, as long as it is just text. You could not send inverse characters and CONTROL

characters unless both sending and receiving terminals were in ATASCII.

3) If you don't have a copy of *850 EXPRESS!* version 3.0, ask your Sysop to post it for you. If he doesn't have it, contact me and I'll get it to you.

4) I only know for sure that this method of auto saving works with *850 Express* version 3.0. I know it does NOT work with MPP Express version 1.0. I haven't tried it with *1030 EXPRESS* although I feel it probably would not work since the 1030 does not come with a ring detector.

5) I truly recommend Spartados 2.3 because of the large buffer it gives and it will read and write to most any other DOS.

I sincerely hope I didn't make this sound difficult to set up...it's not. In MOST cases you simply turn on your modem, boot the program, Hit ESCAPE and then hit OPTION. And that's all! If you have any questions, comments, or just want to try it out, you can call my autosaving *850 Express* at 813-393-0173, between the hours of 1:00am and 8:30am, 300 baud HALF DUPLEX, ATASCII (ASCII will work fine if you don't have ATASCII). I auto receive at 300 baud because not all my family members have 1200 baud yet...but I have a feeling that it won't be long!!! Remember also that when you call another modem set up to autosave, you receive no prompts when the modem answers the phone. As soon as the connection is made, you are "live" with the other computer. You may then type your message or send a pre-typed file from disk. DO NOT SEND XMODEM to me since I do not set up my program to receive that way.

I sincerely hope you receive some enjoyment out of information.

Bob Fasoldt

MODEM: 813-393-0173 1:00am-8:30am

SOFTWARE REVIEW: *SUB BATTLE SIMULATOR* by Chris Freemesser

Have you ever wondered what it would be like to be the captain of a submarine during World War II? If you answered yes, then *Epyx* has made it possible with *SUB BATTLE SIMULATOR*. It accurately recreates submarine battle in almost every respect. When you first load up the game, the credits mention the upcoming *TANK BATTLE SIMULATOR*. If *SUB BATTLE* is any preview to it, then it should be spectacular.

You have the option of either target practice, a single mission, or a wartime command. If you choose the last two, then you get to decide what side you wish to be on (American or German), and what level of play you wish. The higher the level, the more realistic it gets with respect to enemy strength, times for various events, and the amount of damage your torpedoes do. Depending upon what year the war is in, your submarine type changes as it actually did. This effects the amount of torpedoes you can carry and the number of tubes you have, the depth you can dive, and the speed you can travel. Also, the game allows you to either play actual mission time (why anybody would want to play one mission for three weeks is beyond me), or you can speed up time up to 4 game hours for every second of real

time. This comes in handy when traveling to/from your assigned stations. In the easier levels of play, there is the navigator option which gets you to your station in a matter of seconds. As to sinking enemy ships, this is the best part of the game. Most of the enemy ships you sink are convoy ships, which include merchantmen, tankers, transports, escort ships, patrol boats, destroyers, battleships, and aircraft carriers. Also, you are harassed by enemy planes when you are near the coast. When attacking, you are sometimes plagued by dud torpedoes, the percentage of which depends on the type you are carrying. The type of torpedo also changes as it did during the war. You are also equipped with anti-aircraft guns, deck guns, radar, sonar, maps that can change size from 7 miles to 2000 miles, side views, a target book to identify enemy ships, and a radio to send your position and distress signals. As if that wasn't enough, you can be damaged to the point of having to abandon ship, which is another option of the game. You can either be rescued (if you radioed before abandoning), or lost at sea. If you beach your sub, you are automatically killed. As for playing the game, you have the option of using both the keyboard and the mouse at the same time, which is very helpful in some circumstances. The only gripe I have against game control is that the pointer constantly blinks, and it sometimes takes numerous clicks to get something to work. In some circumstances, you may be pointing to go in one direction (on the compass), and it will send you in the other direction. This is probably just a small glitch in the program.

At the end of each mission, you are rated in your efficiency. If you did a poor job, you can be relieved of your command! Overall, I highly recommend *SUB BATTLE SIMULATOR* by EPYX. The gameplay is very good, and it is very realistic.

SUB BATTLE SIMULATOR runs on either a 520/1040ST with color monitor and any drive. Retail price is \$29.95.

A POINT OF CONTENTION

By Jeffrey Summers

I happened upon an interesting "undocumented feature" in *ATARI BASIC* (8-bit) then other day. I was debugging a program that had been typed in sometimes in *ATARI Basic* and sometimes in *TURBO Basic XL*. I listed the file out to disk, then re-entered the program to free up some memory (unused variables, the extra bytes my rev B Basic puts at the end of every SAVE). However, when the program was re-entered, several program lines were flagged as having syntax errors. These lines were working fine, doing their job in the program before, but now they were syntax errors. Inspection showed that each line contained a POINT statement.

It turns out that *ATARI BASIC* will not allow you to type an expression for the sector and byte values in a POINT statement; they must be "plain vanilla" variables. This is an example of what Atari Basic was not allowing: 10 POINT #1,X1*X2,Y The X1*X2 is flagged as illegal syntax in this statement. Instead, Atari Basic wants 10 X=X1*X2:POINT #1,X,Y

Turbo Basic does not restrict you in this way. The first statement is entirely legal to TB. Now, here's where it gets interesting. If you type the line in with TB you get no error. If you then run the program using regular AB, it runs perfectly

well - no error is generated and the program works as expected. AB will execute the statement properly even if it can't be entered in that language. Obviously inconsistent, but thankfully it isn't the other way - think of if the language allowed you to type in a statement that it didn't know then how to execute.

BASICALLY SPEAKING

by Jeff Summers

First one point of errata. In the program in last month's edition, there was a loop with the index I from lines 45 to 70. You can delete lines 45 and 70 to get rid of the loop and the program will run faster - I originally was going to do something fancy in the loop but then thought better of it.

To finish off with an overview of the various graphics modes available on your ATARI, these last few pertain only to people who have more recent computers - those manufactured 1981 or more recently, and some modes only on the XL or XE systems. We've talked about modes 0-8, 9 and 11, so it's time to talk about modes 10 and 12-14. Mode 10 is one scan line high and 4 dots wide, thus giving you a resolution of 80 columns by 192 rows. The color that will be displayed by the PLOT and DRAWTO statements is chosen by the COLOR statement, with a range of 0-8. The colors 0-4 are the same as in the other modes, but this mode uses a set of auxiliary color registers located at memory locations 704 to 707 for the additional colors. These color registers must be POKE'd with the color value (hue*16 + lum) that you want displayed. These registers are also used by player missile graphics to choose the colors of the players and missiles. This mode gives you the most colors with the fewest restrictions of any graphics mode.

Graphics modes 12 and 13 are the "multicolor character" modes. With these modes characters are displayed that are made up of more than one color for the character. However, these modes also require the use of a redefined character set for most uses. To see what the usual character set looks like in these modes type the following:

```
10 GRAPHICS 12
20 FOR I=0 TO 127
30 PRINT #6;CHR$(I);
40 NEXT I
50 END RUN
```

The difference between modes 12 and 13 is that mode 13 characters are twice as high. Try the above program after changing the 12 to a 13 in line 10 and see what I mean.

Redefined character sets are something I can cover here if people desire, I'll wait to see if there is interest before attacking that topic as it is a little advanced though.

Mode 15 is the mode that is used by most of the commercial drawing programs. It is often called "ANTIC E" in the magazines and books because until the XL and XE machines were released you couldn't invoke this mode with a simple GRAPHICS command. The pixels here are one scan line high but two dots wide, giving the highest multicolor resolution mode of 160 columns by 192 rows. The color are chosen just like with the 4-color map modes discussed last

time (modes 3, 5, and 7). Mode 14 gives the same resolution but only 2 colors, the background and the color from register 1. Note the similarity here to the even numbered map modes 4 and 6.

So, that pretty much concludes the overview of the various graphics modes available, and I hope that it gave them some semblance of an organization that will make them easier to remember. Please note that the resolutions I gave are for a full screen in that mode. If you have a text window at the bottom of the screen, you must allow for these four lines of mode 0 when figuring the bottom of the screen. Screen windows are the default status of all but the GTIA modes, 9, 10 and 11. To eliminate the text window, add 16 to the mode number in the graphics statement. Thus, to get a no-text window screen of mode 2, you would type GRAPHICS 18. Sometimes in magazines you will see it as GRAPHICS 2+16 reminding the programmer that it is really graphics 2 with the 16 added to make it full screen.

Speaking of adding numbers to the mode number for special effects, a less commonly used, less well known function is that you may add 32 if you don't want the screen cleared. This is of limited utility, as the differing memory requirements of the modes makes it challenging to know where on the screen your information will be in the new mode, but here's an example of this feature:

```
5 DIM A$(1)
10 GRAPHICS 2
20 PRINT #6;"HELLO there"
30 GRAPHICS 1+32
40 INPUT A$
50 GRAPHICS 2+32
60 INPUT A$
70 GOTO 30
```

Pressing RETURN toggles between the two modes without clearing the screen.

ATARI IN THE NEWS

taken from *Computer & Software News*, July 13, 1987

Northbrook, Ill. - Mindscape and Atari Games, Milpitas, Calif., have signed an exclusive agreement to publish home computer versions of Atari's line of standalone video arcade games.

The first will be *Paperboy* and *Gauntlet*, priced at \$34.95 and due for shipment next month. The games will be available for most PC'S.

Mindscape president Roger Buoy expects each to sell 100,000 copies.

"These games have been a tremendous success and there's a pent-up demand for the home computer version. The retailers have been asking when we're going to print both", Buoy said.

"We wanted to be associated with the best company in the industry. I think they're a top-notch company in their concept and their marketing approach," Buoy said of Atari games.

He added that he was approached by other manufacturers but waited until he could work with Atari

Games.

Buoy said Atari has always had high-quality products and a keen perception of the market and "they are far and away the best company with which to be associated."

Dennis Wood, senior vp of Atari Games, said his firm has been licensing its coin-operated arcade games for home computer publishing for about 2 1/2 years, but this is the first exclusive agreement.

"In the past we haven't restricted our licenses to anyone, but we believe in the strong distribution power of *Mindscape* and its reputation," he said.

Paperboy and *Gauntlet* will be sold through the distributor channel and through retailers.

Scheduled for future release are *Atari Games' Rolling Thunder* and *720*. Also planned are *Road Runner*, *Road Blasters* and *Gauntlet II*, all to run on most home computer formats.

SUPER SHORT-CUTS FOR YOUR 8-BIT SYSTEM

Assembled from many various sources

Presented here by Terry Koelling

WB4LEJ Lilburn, GA

Courtesy JACG Newsletter, June 1987

QUICK RAM CHECK: Checks ram from just below basic down to location 10.

```
10 ? FRE(0): GOSUB 10
```

Type RUN and the screen should show numbers down left side counting DOWN by 4 locations. It should end with:
ERROR- 2 AT LINE 10

GTIA OR CTIA: Some older systems had CTIA video chip and could not display the newer modes of graphics.

```
10 GRAPHICS 10
```

```
20 GOTO 20
```

Type RUN. If the screen goes black, then you have the new GTIA. If it goes blue, you have the CTIA and should upgrade.

A OR B REV. ROMS: Older systems had "A" ROMS and they had some bugs. "B" ROMS corrected them.

```
? PEEK (58383)
```

"B" ROMS=0...."A" ROMS were generally 56, but anything other than 0.

MORE ON ROMS:

```
? PEEK (64728)
```

If=162 then 400/800 system, otherwise, XL

```
? PEEK (65528) 400/800 only
```

```
221="A" ROM
```

```
214="A" PAL ROM
```

```
243="B" ROM
```

```
34="B" PAL ROM
```

```
? PEEK (65527) XL only
```

Continued on Page 20

ARC, ARC, ARC, ARC

HOW TO HANDLE THOSE ARC FILES

by Dan Rhea

(c) 1987 (Reprinted from *The Atari Journal*, May 1987)

Being a SYSOP on CompuServe Atari16, you would imagine the most common question the users ask would be "How do I download?" Well, it's probably the second most-asked question... The first, I hope to deal with in this article, is simply "How come my .ARC files don't work?"! Nothing in life comes easy, so I'm going to run you through ARC, beginning with the hard way, followed by the detailed way, and then, if you have the patience to stay with me, the easy way (i.e. lazy).

First off, let's define an ARC file -- It is a collection of individual files, in alphabetical order, and in most cases, compressed in some way, and collect into one file with the extender ".ARC". Additionally, each file has a CRC attached to it (so we can confirm its integrity), noting what type of compression was used on it, its new and old sizes, and a date and time stamp. The advantages gained are approximately 55% size reduction for text files, 30% reduction for most programs, and as much as 55% reduction for pictures (better than TINY, usually).

Now, on to that most common problem -- our user, Suede Onym, who has been downloading files for years for his 8-bit machine, has finally made the obvious choice and stepped up to an Atari ST. After wandering around the Data Libraries for a bit, he spots several programs he wants. He chooses, for example, MONOP.ARC, GNUMAC.ARC (and LOOKSE.ARC? Nah!). Now down come the files, much larger than the old 8-bit ones, he will probably note. The download is finished, and he dutifully double clicks on MONOP.ARC, and is faced with the choice [List] [Print] [Cancel] (A particularly irritating, one, since it's not in the manual). After filling the screen with trash, and watching his printer do things he never thought it capable of, he will normally rename the file (i.e., NONOP.ARC to MONOP.PRG).

With a happy smile on his face and the confidence that he has finally wrestled this beast to the ground, he double-clicks on MONOP.PRG, only to get the dreaded "TOS ERROR NO. 35"! For those of you not in the know "TOS ERROR NO. 35 is the ST equivalent of "Huh?" or "I have no bloody idea what to do with this". Suede is, by now, quite miffed. He has downloaded a "large" file that he can't do anything with. Fortunately he does the obvious (at least I hope this is what most of them do!), he calls back, and leaves us a message "I downloaded MONOP.ARC and..."

What Suede is missing, of course, are probably the first two files anyone on CompuServe, a BBS, or any other service should download. The files are ARC.TTP and ARC.DOC (both in DL3 of Atari16 by the way). At this point, a thorough reading of ARC.DOC is in order, though rarely done. So let's skip all the details for now, and let Suede get on to playing MONOPOLY.

First off, you will note that this is one of those dreaded ".TTP" programs. All we really need to do at this point is "extract" all the files from MONOP.ARC. Here are some examples of how to do just that -- On the OPEN APPLICATION line type:

```
xh MONOP.ARC *.*
```

Roughly translated, the "x" means extract all files. The

"h" means hold off going directly back to the Desktop when we finish, so you can see any errors (also if used by itself, it will give you a quick HELP screen). The MONOP.ARC tells where to get the files. The .ARC extender is optional here, but I suggest you use it anyway. Finally, the "**.*" tells where to put the extracted files. This is also an optional default, but one I again suggest you use. Hopefully, Suede has plenty of disk space on the disk that MONOP.ARC is on, since that is where all the extracted files have been told to go, but just to make his life even more difficult, we will assume that he doesn't. No problem... TTP to the rescue. Suede can now type the following:

```
xh A:\MONOP.ARC B:\*.*
```

Now all the extracted files will come from the A: drive and go to the B: drive. We've been nasty enough to poor Suede so far, so we'll let him have a dual drive system and save him all those disk swaps! It is also possible to extract to and from a Ram-Disk as well, and save lots of time, if you have the space for it!

Ok, we have now make Suede Onym an expert in ARC file extraction, and it's now time to see what this incredibly powerful program is really capable of! Back to CompuServe, to pick up the file ARC.ARC, in DL3 of Atari16. This gives you two additional ARC utilities (AROM.TTP - Archive Merge and ARCX.TTP - Archive Extract), and a new ARC.DOC file. This is the one with the real meat in it.

The general format of the ARC command line is:
{amufdxerplvtc} [bswnh] <archive> [filename]

Below is an alphabetical list of the various options available:

a : ADD FILES to archive, ignoring time and date information.

b : Retain a BACKUP of the archive you are working on, that is unaltered and has the extension .BAC, not .ARC.

c : CONVERT an entry to a new packing method. This is used if a newer compression scheme comes along and you suspect you could obtain a better compression percentage.

d : DELETE files from archive (forever), and recombine the files to remove unwanted data.

e : EXTRACT files from the archive.

f : FRESHEN files in archive, keeping the "newest" files, but not adding any that did not already exist.

g : When used as the last option supplied, it can be followed by a key (password) that will encrypt or decrypt the data in the archive (i.e. xhgBOOT MONOP.ARC *.* , where BOOT is the key).

h : HOLD SCREEN before returning to Desktop, and if supplied alone, produces a short "HELP" list of valid commands.

i : LIST the names of the files in an archive.

m : MOVE FILES to archive, ignoring time and date information, and delete the file from its previous location.

n : Suppress NOTES and comments generated (also not

usually a good idea).

p : PRINT a file from archive, i.e. copy a file from archive to standard output.

r : RUN a file (with arguments), from the archive (TTP, TOS, or PRG and if named the same, the .RSC file is used as well).

s : SUPPRESS COMPRESSION. This keeps the file in exactly the same form it was supplied in.

t : TEST archive file integrity to make sure it contains no bad files.

u : UPDATE files in archive, keeping the "newest" file and adding any file that does not already exist.

v : VERBOSE LISTING of the files in an archive that includes name, compression method, CRC, new and old sizes, the percentage saved and the date and time stamp.

w : Suppress WARNING MESSAGES (not usually a good idea).

x : EXTRACT files from the archive.

Now that I have buried you under all that information, let me show you a few examples of how to use it (or abuse, as the case may be), and we will move on to making ARC simple again.

Ex. 1: ah a:\swill.arc c:\mydocs*.*

This will create a file on drive A: called "swill.arc", and fill it with all the files in the folder "mydocs" from drive C: (usually the hard disk or Ram-Disk).

Ex. 2: mhgARCH b:\source.arc a:\cprogs*.*

This will create a file on drive B: called "source.arc", that contains all the files with the extension .c, in the "cprogs" folder on the A: drive, and encrypted using the key "ARGH". By the way, if you encrypt your files, you had better remember the key!

So much for the silly examples, on to more important things, like how to make this stuff simple, so I don't need to read the documentation every time I need a file! Once again, it's back to CompuServe for another .ARC file, and this one is called ARCSHE.ARC. This archive, once you extract the files, gives you ARCSHELL.PRG and ARCSHELL.RSC. These were written in MODULA2 by Jerry K. LaPeer, and provide you with a very clean GEM interface to all those options. It also provides file selector boxes to help you select what to archive or extract, and where to get or put the files. Once I ran across this little gem, I typed my last TTP OPEN APPLICATION command line for ARC.TTP (note, you still need ARC.TTP since Jerry's program is simply a shell).

Files are stored in alphabetical order. The header has the following format:

Filename: 13 bytes null (0) terminated (char)
Size: 4 bytes (long int)
Date: 2 bytes (int) (IBM/Intel format)
Time: 2 bytes (int) (IBM/Intel format)
CRC: 2 bytes (int)

Length: 4 bytes (long int)

The ARC file is fully compatible with ARC files used by IBM and Amiga (and in some cases CP/M). That, of course means data compatible, not program compatible. An example would be for me to download a bunch of IBM files, archive them on my ST, and then send them to a friend with an IBM. He will be able to extract and run the files, as if they came directly from an IBM system ARC program.

Compression methods used by ARC.TTP:

1: No conversion, listed in verbose as "--", no longer used.

2: No conversion, listed in verbose as "--", superseded 1 in that the original file length is retained.

3: Repeated character compression, listed in verbose as "Packed". In very simplified terms, "AAAAA" is treated as "A5" although the "5" is stored as a binary number, not an ASCII 5.

4: Huffman Encoding, listed in verbose as "Squeezed". The method all those SQUEEZE programs used. Converts characters into smaller bit strings depending on frequency count of appearance in file.

5, 6, and 7: Lempel-Zev Compression, listed as "crunched" in a verbose listing.

8: Dynamic Lempel-Zev Compression, listed as "Crunched" in a verbose listing. Any other types (perhaps the next generation), would be listed as "Unknown!" in a verbose listing.

Now that you are again burdened with more information than you care to know about, it's time to give credit where credit is due. ARC, was developed originally for the CP/M and MS-DOS industry, based on the work of Huffman, Kunth, Knott, Welch and several other scientists. The Atari ST version is based on the IBM version, originally done by Thom Henderson. The Atari ST version was created by Harvy Johnson (see the doc file in ARC.ARC for Harvy's address and such). The majority of the technical information contained in this article came directly from Harvy's documentation in the file ARC.ARC. When I mention credit where credit is due, if you download just one file that has been processed with ARC.TTP then Mr. Henderson has saved you 30 to 50 percent of what it would otherwise have cost you to download the same file(s), not processed by ARC.TTP!

TWO BY TWO OUT OF THE ARC

by John Barnes

courtesy of Current Notes, June 1987

There is a nifty little utility called ARC that is every bit the life-saver that Noah's original was. Those of you who are into telecommunications have been forced to learn about it because most downloadable packages of any consequence are found in ARC'ed form on BBS's. This saves the SYSOP a lot of effort and space and the customer a lot of time. Put briefly, ARCING is a way of compressing files and combining many files into a single file, called an archive. The result is a tidy package containing everything related to a particular

application.

Run-time images, documentation, resource files, source codes, and any related data files can all be kept and shipped together. Naturally, you must be able to separate all of these components when you go to use your download, and the ARC utility does this too. In a certain sense an ARChive is like a folder.

The ARC utility on the ST, however, does one thing that TOS does not. It preserves the creation date on the files that it puts into the archive. Better yet, it uses this date as the creation date when it extracts the files. Those people who have to move files between disks a lot will immediately appreciate the virtue of this. On the other hand, those who think that changing the date when you copy a file from one disk to another is a "Feature" should rethink the importance of keeping track of the history of files.

Because of this handy feature I have started to ARC all kinds of collections of files. Obsolete correspondence, spreadsheets, and software packages were the first to be gathered up. I have found that the time involved in creating an archive is not burdensome. It is easy to add a couple of files at a time. I am now starting to back up some of my more important software packages this way and I have freed up enough disks so that I may be able to avoid a trip to my disk supplier for quite a while.

In short, I urge everyone to try this handy utility for purposes other than the obvious ones. Meanwhile, I would still to hear (1) if anyone has a utility for changing a file date,

and (2) is Atari going to fix this bug in TOS?

I notice that the 8-bit roundtable on GENie contains a lot of ARCed stuff and I would appreciate it if someone in the 8-bit world would let me know if the utility is available for their machines because it would help a lot in maintaining our disk libraries.

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Bit Hints Continued from Page 16

? PEEK (65527) XL only
10=1200 XL 1st. Rev.
11=1200 XL 2nd. Rev.
1=600/800 XL 1st. Rev.
2=600/800 XL 2nd. Rev.

WHICH BASIC REV. DO YOU HAVE?:

? PEEK (43234)
162= Rev. A (Almost all 400/800)
96= Rev. B (Early XL's. Many serious bugs. Get Rev. C.) 234= Rev. C (Latest and greatest.)

TO FORCE A COLD START!

Type A=USR(61733) for 400/800
A=USR(58487) for 1200 XL
A=USR(58484) for 1200 XL WARM START

TURN OFF ANTIC: To speed up processing (like when doing sorts), turn off ANTIC. (Screen goes black).
POKE 559,0 -> off...POKE 559,34 -> on
If your screen is set up with a picture (format) that you want back, then first PEEK (559), and save the value. When you want to restore it, just POKE that same value back into location 559.

DISABLE THE 'BREAK' KEY: You may want to protect your program from someone using the BREAK key to stop it
POKE 16,64 and POKE 53774,16 at the start and after each GRAPHIC

command.

REBOOT WITH 'RESET' KEY: You may want to force a re-boot from disk if someone hits the reset key, perhaps in order to break into and list you Basic program.
POKE 580,1 in your program

DISABLE THE KEYBOARD: To disable the keys of the keyboard from your program.
POKE 16,255

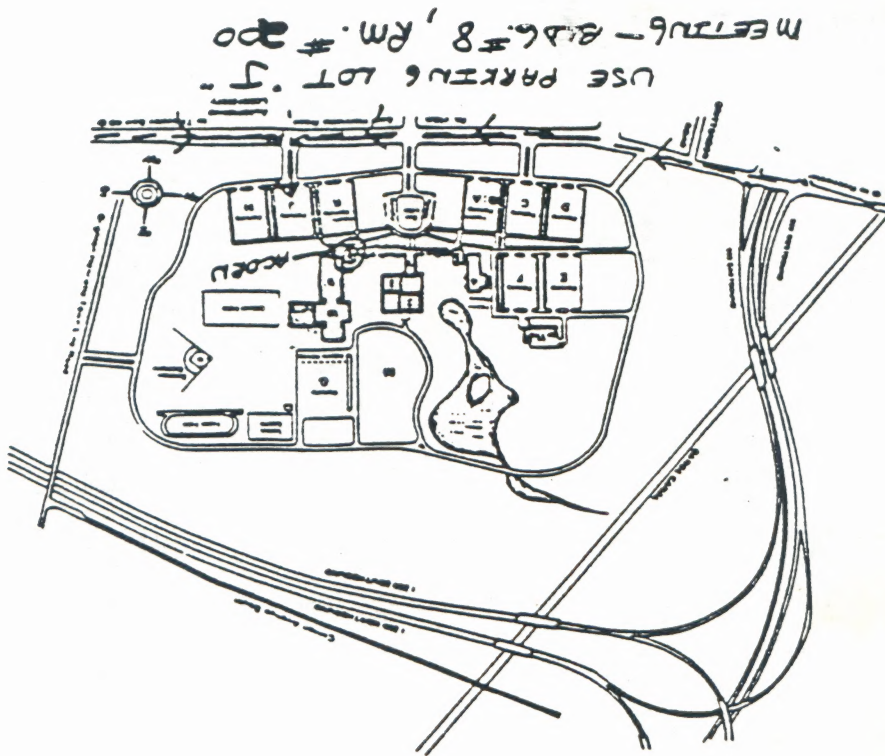
MAKE YOUR BASIC PROGRAM UNLISTABLE: You may want to protect your Basic program so no one can "see" your code.

1) POKE 202,1....will erase your program after anything that causes the "READY" prompt. ie...END or RESET or BREAK.
2) Add the following line to your program. MAKE SURE YOU HAVE A BACKUP OF YOUR PROGRAM WITHOUT THIS LINE!!
32767 POKE PEEK (138)+256*PEEK (139)+2,0: SAVE "D:Filename": NEW
Type....GOTO 32767
The program can be executed, but not listed!

TURN OFF BEEPS WHEN LOADING PROGRAMS:
POKE 65,0 = off....POKE 65,3 = on

START THE 'ATTRACT' MODE: POKE 77,129

OUTPUT TO PRINTER INSTEAD OF SCREEN:
POKE 838,166: POKE 839,238
Back to the screen!!: POKE 838,163: POKE 139,246



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